2.3 STEP 3 - PRIORITIZATION OF HAZARDS

Item(s) Needed:	**Completed Level I Ergonomics Assessment Checklist** **Checklist Scoring Summary**

The purpose of this step is to "score" the Level I Checklist in order to determine the employee's exposure to ergonomics risk factors from the individual tasks and from the job overall. You will use the Checklist Scoring Summary Form to determine the exposure.

2.3.1 The Checklist Scoring Summary Design.

The *Checklist Scoring Summary* design resulted from a combination of findings from the literature review as well as the consensus judgment from experienced ergonomists at ADL. In the literature, there is a lack of validated methods for determining a "threshold" between "ergonomic problem/risk of WMSD" and "no ergonomic problem/no risk of WMSD." Therefore, the scoring concept and results generated by the assessment are designed to *prioritize* the need for Corrective Actions based on the highest exposure to ergonomic hazards. In other words, a *High* rating *means that exposure to risk factors which have been associated with WMSDs* is high. **It does not mean that the risk for injury is high**. When interpreting results, you should focus problem-solving efforts on any job, task, or body region that is rated *High* or *Medium.*

Priority scores are generated for each body region, for each task, and for the overall job. Priority ratings are provided for body regions, tasks, and overall priority based on the highest score in that data. Figure 2.5 shows the Scoring Checklist Summary.

Technician

Date_____
Job Description

Scoring Summary: Transfer scores from individual scoring sheets.

Body Region	Task Scores					Priority Score by Body Region	Priority Rating by Body Region
	Task Name:	**Task Name:**	**Task Name:**	**Task Name:**		**Add across row and divide by # of tasks for average**	High: 8+ Med: 4-7 Low: 0-3
Shoulder/Neck					=		High Med Low
Hand/Wrist/Arm					=		High Med Low
Back/Torso					=		High Med Low
Legs/Feet					=		High Med Low
Head/Eyes					=		High Med Low

Select the highest body region score for each task then circle below for High, Med, Low	Highest Score	Highest Score	Highest Score	Highest Score	Environmental Rating
High: 8+ Med: 4-7 Low: 0-3	High Med Low	High Med Low	High Med Low	High Med Low	High Med Low

Overall	
Highest Priority Score by Body Region	Overall Priority Rating **High** **Med** **Low**

Figure 2.5
Checklist Scoring Summary

2.3.1.1 Body Region Score. Body Region scores for each task are determined by totaling the responses to the Job Factor questions for each task. Body Region scores for the job as a whole are determined by averaging scores across tasks. The averaging process was selected to reflect the beneficial impact of task variety. Consider the following example jobs:

- Job A is comprised of just one task: palletizing. This task exposes the shoulder/neck to a High level of ergonomic risk factors (Body Part Score = 8). Since there is only one task, the Body Region Priority Score = 8, which is a High rating.
- Job B is comprised of two tasks: palletizing and scanning. This palletizing task, which is performed for five hours per day, exposes the shoulder/neck to a High level of ergonomics risk factors (Body Part Score = 8). The scanning task, which is performed for three hours per day, exposes the shoulder/neck to a Low level of ergonomics risk factors (Body Part Score = 2). The Body Region Score is derived by adding the "8" for palletizing and the "2" for scanning, and dividing by the number of critical tasks (8 + 2 = 10 / 2 = 5). Therefore, the average Body Region Priority Score = 5, which is a Medium rating.

Comparison of the Body Region Priority Score for the two tasks suggests that Job B is easier on the shoulder/neck than Job A. The Medium rating on Job B suggests that, since the employee spends part of the day performing a task (scanning) which provides some relief to the shoulder/neck, the overall potential for a shoulder/neck problem is reduced. This is consistent with the ergonomics research literature that indicates that a job designed with task variety should reduce the overall potential for WMSD development. Also, since the rating system still indicates that when palletizing is performed the shoulder/neck is at High priority, you are directed to identify controls which reduce exposure to ergonomics risk factors that impact the shoulder/neck during palletizing.

While averaging may not always reflect the precise daily physical experience of the employee, it provides you with a standardized method for determining the impact of overall daily exposure. Averaging can also help focus problem-solving efforts over a broad spectrum of jobs in order to achieve the desired impact on employee health and safety.

2.3.1.2 Task Score.

The individual Task Score is determined by selecting the highest numerical body region score for that task. The highest numerical body region score is converted into a High, Medium, or Low rating. No score averaging is done since the feeling of fatigue or pain, which are often precursors to WMSD development, is not "averaged" throughout the body by the employee. For example, if exposure to a high level of risk factors causes an employee's shoulder to hurt, the employee

does not think, “my shoulder hurts, but the rest of my body is OK, so I must be OK.” Rather, the employee reports a shoulder problem because that part of the body hurts. Therefore, if the shoulder is exposed to a high level of ergonomic risk factors, the Task Score reflects that most significant exposure.

2.3.1.3 Overall Job Priority Score.

The Overall Job Priority Score (*High*, *Medium*, or *Low)* is determined by selecting the highest Body Region Priority Score. The basis for this scoring concept is identical to that which was described for the Scoring Summary. The Overall Priority Rating is used to determine which jobs present the most risk for WMSDs and require attention first.

2.3.1.4 Use of the Scores and Ratings.

While the Overall Job Priority Rating/Score is used to determine which *jobs* to address first, Task Ratings/Scores are used to determine which *task(s) within the job* need to be the focus of problem-solving efforts. The Body Region Scores for each task are used to identify controls for the body parts that are exposed to the highest level of ergonomics hazards.

In summary, there are three major steps to completing the prioritization of hazards:

Step 3a. Complete the top entries on the form (date, name, etc.).

Step 3b. Complete the Scoring Summary.

- The first step is to transfer the names of the *critical tasks* selected for the Level I Ergonomics Assessment Checklist (e.g., calling, palletizing) to the *Task Scores* columns.
- Next, transfer the *task scores* (column total) from each individual checklist (e.g., *Shoulder*/*Neck, Hand*/*Wrist*/*Arms*) to the appropriate task column. Once you have transferred *all* task scores for *each* critical task it is time to select the highest body region score (per task).
- Next, select the *highest* Body Region Score from each task and write the number in the *Highest Score* box at the bottom of each Task Name column. Then circle the appropriate box below for *High, Medium, or Low* for that task.
- Now add across the rows and calculate the *average* to obtain a *Priority Score by Body Region*. (To obtain the average, add across the row and divide by the number of tasks.) Be sure to calculate the average for all Body Regions (e.g., *Shoulder*/*Neck, Back*/*Torso*, etc.) and then circle the appropriate response (High, Medium, or

Low) for that body region in the *Priority Rating by Body Region* column.

- From page 7 of the Level I Ergonomics Assessment Checklist transfer *High, Medium, or Low* Environmental Rating to the *Environmental Rating* box.
- Finally, at the bottom/right of the page, complete the *Overall* box. Into this box, transfer the highest average body region score from the *Priority Score by Body Region* column above and circle *High, Medium, or Low.*